

WHAT IS CLAIMED IS:

1. A data communication method, for nodes connected via a communication control bus along which transmission of a mixture of control signals and data  
5 is enabled, comprising the steps of:

inhibiting entry of predetermined instructions at an instruction entry unit of a first node during a data transfer from said first node to a second node; and

10 providing a predetermined message for a user, on a display unit at said first node.

2. A data communication method according to claim 1, further comprising a step of displaying an alarm message on said display unit at said first node upon entry of one of said predetermined instructions at said  
15 instruction entry unit during said data transfer.

3. A data communication method according to claim 1, wherein said first node is an image data supply  
20 source and said second node is a printer for receiving and printing image data.

4. A data communication method according to claim 1, wherein said communication control bus includes an  
25 IEEE 1394 serial bus.

5. A data communication method according to claim

- 63 -  
1, further comprising:

a designation step of designating data to be transmitted from said second node to said first node; and

5 a search step of searching for said data designated at said designation step and of transmitting said designated data from said first node to said second node.

10 6. A data communication method, for directly exchanging data by a first node and a second node, which are connected via a communication control bus along which transmission of a mixture of control signals and data is enabled, said data communication

15 method comprising:

a request step of requesting transmission of data from said second node to said first node;

20 a search step of, in response to said request from said second node at said request step, searching for corresponding data in said first node;

a transmission step of transmitting data obtained at said search step to said second node; and

25 a display step, during data transmission at said transmission step, of inhibiting entry of predetermined instructions at said first node and of displaying a predetermined message for a user.

- 54 -

7. A data communication method according to claim  
6, further comprising a step of displaying an alarm  
message at said first node upon entry of one of said  
predetermined instructions at said first node during  
5 said data transmission.

8. A data communication apparatus, which is  
connected to a network via a communication control bus  
along which transmission of a mixture of control  
10 signals and data is enabled, comprising:

instruction entry means manipulated by a user when  
entering an instruction;

reception means for receiving a command from a  
first node via said communication control bus;

15 transmission means for transmitting, to said first  
node, data corresponding to a command received by said  
reception means; and

control means for inhibiting, during transmission  
of data by said transmission means, entry of  
20 predetermined instructions at said instruction entry  
means, and for displaying a predetermined message for  
said user.

9. A data communication apparatus according to  
25 claim 8, further comprising alarm means for displaying  
an alarm message upon entry of one of said  
predetermined instructions, entry of which is inhibited

during said data transmission.

10. A data communication apparatus according to  
claim 8, wherein, upon receipt of a data output end  
5 signal from said first node, said control means removes  
inhibitions on entry of said predetermined  
instructions.

11. A data communication apparatus according to  
10 claim 8, wherein said first node is a printer and said  
communication control bus is an IEEE 1394 serial bus.

12. A data communication apparatus according to  
claim 8, which concerns an image data supply source,  
15 wherein said command received by said reception means  
includes information for specifying said image data.

13. A data communication system, which includes a  
first and a second node connected via a communication  
20 control bus, along which transmission of a mixture of  
control signals and data is enabled, so that data are  
directly exchanged by said first and said second node,  
said first node including:

25 instruction entry means manipulated by a user to  
enter an instruction,

transmission means for transmitting pertinent data  
in response to a data request from said second node,

and

control means for, during transmission of data by  
said transmission means, inhibiting entry of  
predetermined instructions by said instruction entry  
means and for providing a predetermined display for  
said user; and  
said second node including:

request means for transmitting a request to said  
first node for supply of data, and

10 output means for receiving data from said first  
node transmitted in response to said request by said  
requesting means, and for outputting said data.

14. A data communication system according to  
claim 13, wherein said first node further includes  
display means for displaying an alarm message upon  
entry of one of said predetermined instructions, entry  
of which is inhibited, at said instruction entry means  
during said data transmission.

20 15. A data communication system according to  
claim 13, wherein said communication control bus  
includes an IEEE 1394 serial bus.

25 16. A data communication system according to  
claim 13, wherein said first node is an image data  
supply source and said second node is a printer.

17. A storage medium, on which is stored a program for executing a data communication method for nodes connected via a communication control bus, along which transmission of a mixture of control signals and 5 data is enabled, said program comprising:

a program module for inhibiting entry of predetermined instructions at an instruction entry unit of a first node during a data transfer from said first node to a second node, and for providing for a user a 10 predetermined message on a display unit of said first node.

18. A storage medium, on which is stored a program for executing a data communication method whereby data are exchanged directly by a first node and 15 a second node, which are connected via a communication control bus along which transmission of a mixture of control signals and data is enabled, said program comprising:

20 a request module for requesting transmission of data from said second node to said first node;  
a search module for, in response to said request for said second node issued by said request module, searching for corresponding data in said first node;  
25 a transmission module for transmitting data obtained by said search module to said second node; and  
a display module for, during transmission of data

at said transmission step, inhibiting entry of predetermined instructions at said first node and for displaying a predetermined message for a user.

5           19. A data communication system comprising:  
              a first node having an image display monitor and  
              an operating unit;  
              a second node having an operating unit but no  
              image display monitor, said first and said second nodes  
10          communicating with each other by DS-Link; and  
              arbitration means for providing an arbitration for  
              an instruction entered at said operating unit of said  
              first node and an instruction entered at said operating  
              unit of said second node.

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              20. A data communication system according to  
              claim 19, wherein said arbitration means gives a higher  
              priority to an operation for said first node than to an  
              operation for said second node.

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              21. A data communication system according to  
              claim 19, wherein said arbitration means gives a higher  
              priority to an operation for said second node than to  
              an operation for said first node.

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              22. A data communication system according to  
              claim 19, wherein said first node and said second node

are connected together by a serial bus.

23. A data communication system according to  
claim 19, wherein said serial bus conforms to the 1394  
5 standard.

24. A data communication system according to  
claim 19, wherein said second node is a printer.

10 25. A data communication system according to  
claim 24, wherein said arbitration means invalidates a  
manipulation of an operating unit at said printer while  
printing is being performed by said printer.

15 26. A printing system comprising:  
a video apparatus having an image display monitor  
and an operating unit;  
a printer having an operating unit; and  
arbitration means for providing an arbitration for  
20 an instruction entered at said operating unit of said  
video apparatus and an instruction entered at said  
operating unit of said printer.

27. A printing system according to claim 26,  
25 wherein said video apparatus transmits video data  
isochronously, and receives operating state information  
for said printer asynchronously.

28. A printing system according to claim 26,  
wherein said operating state information for said  
printer is displayed on said image display monitor.

5        29. Data communication apparatuses constituting a  
first node and a second node in said data communication  
system.